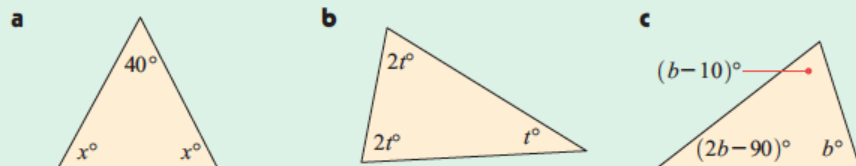
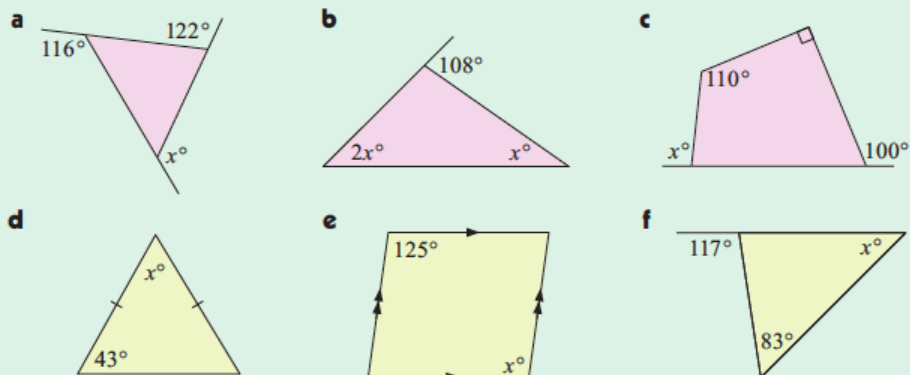


REVIEW SET 14A

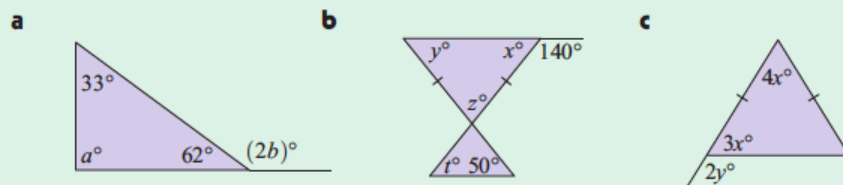
1 Find the values of the variables in the following, giving brief reasons:



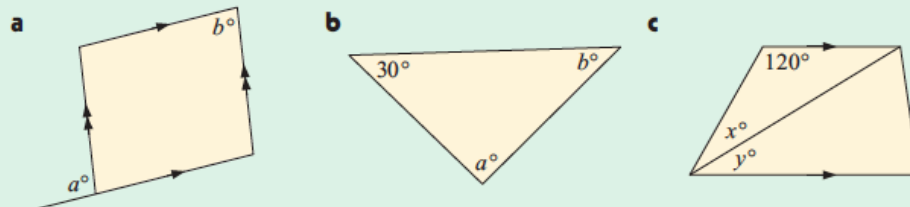
2 Find, giving reasons, the value of x :



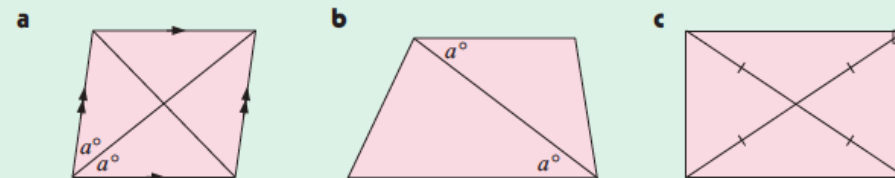
3 Find the values of the variables in the following diagrams:



4 Find equations connecting the variables in each diagram. Give reasons for your answers.



5 Using the information given, name each of the following quadrilaterals. Give reasons for your answers.

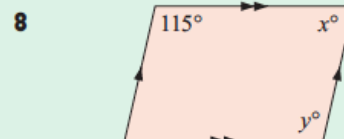
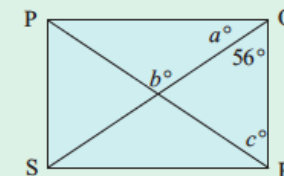


6 **a** Is a square a kite?

b Is a parallelogram a trapezium?

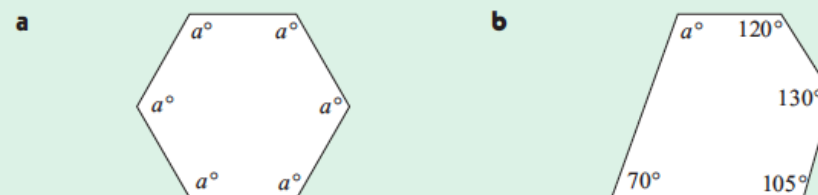
7 PQRS is a rectangle. Find the values of:

a a **b** b **c** c



Using the information given on the diagram, name the figure and find the values of x and y .

9 Find the value of a in each of the following polygons:

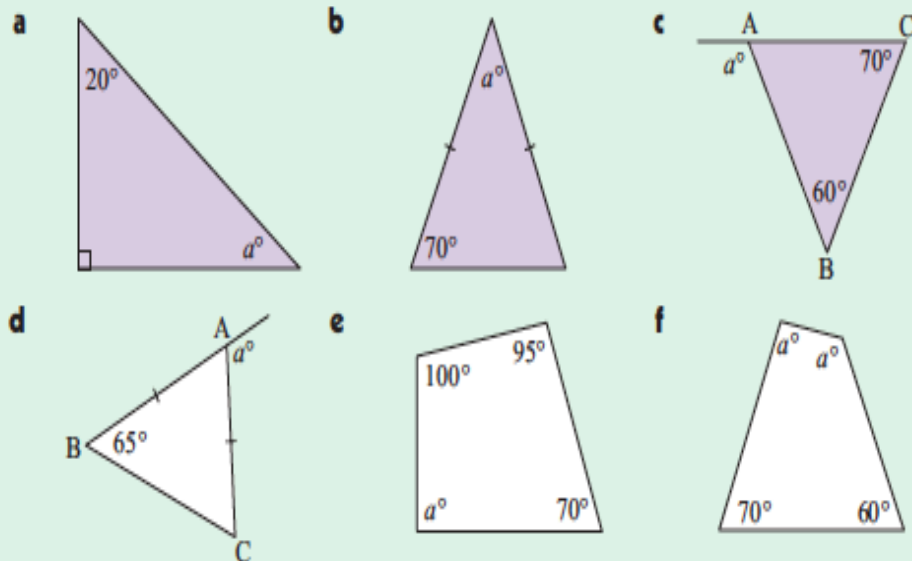


10 Find the size of the angles of a regular 12-sided polygon.

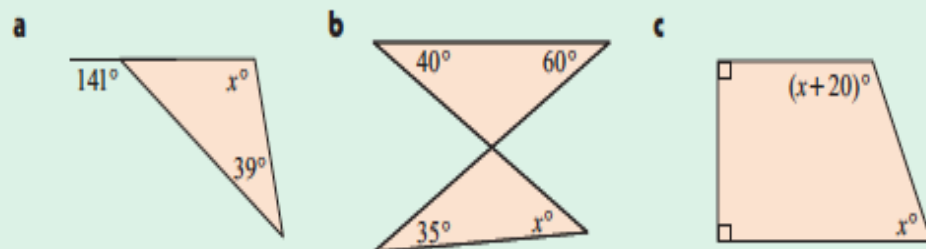
11 A regular polygon has angles of 162° . How many sides does it have?

REVIEW SET 14B

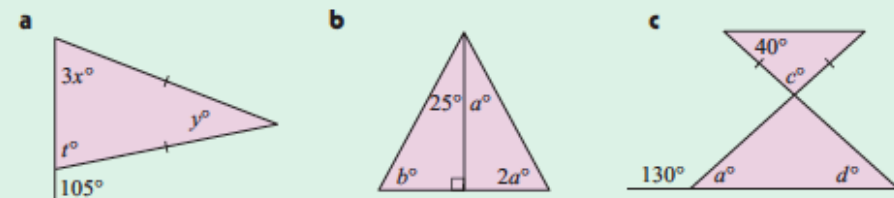
1 Find the value of a in each diagram, giving brief reasons for your answers:



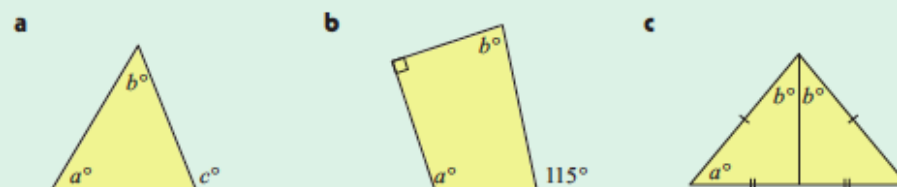
2 Find the value of x , giving reasons:



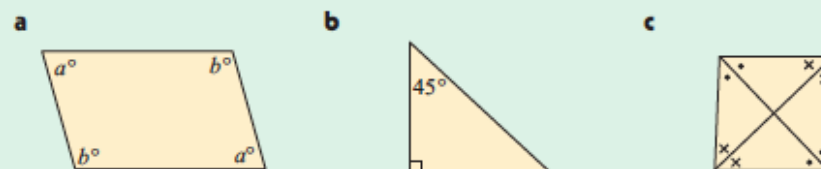
3 Find the values of the variables in the following diagrams:



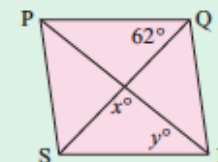
4 Find the equation connecting the variables in each figure. Give reasons for your answers.



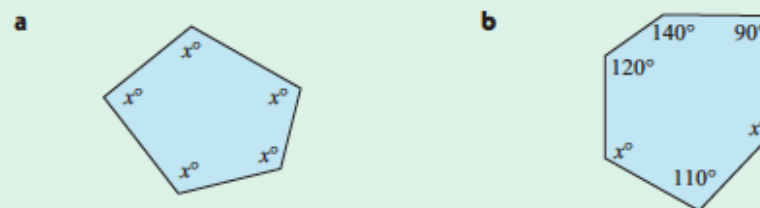
5 Using the information given, name each of the following figures. Give reasons for your answers.



6 PQRS is a rhombus. Find the values of x and y .



7 Find the value of x in these diagrams:



8 **a** Is a square a rectangle?

b Is a rectangle a parallelogram?

9 Find the size of the angles of a regular 9-gon.

10 Can a regular polygon have angles of size 155° ?

REVIEW SET 14A

- 1 a $2x^\circ = 140^\circ$ {angles of a triangle} So, $x = 70$
 b $5t^\circ = 180^\circ$ {angles of a triangle} So, $t = 36$
 c $b = 70$ {angles of a triangle}
- 2 a $x = 122$ {angles on a line, exterior angle}
 b $x = 36$ {exterior angle}
 c $x = 100$ {angles of a quadrilateral, angles on a line}
 d Other angle is 43° {isosceles triangle}
 So, $x = 94$ {angles of a triangle}
 e $x = 125$ {opposite angles of a parallelogram}
 f $x = 34$ {exterior angle of a triangle}
- 3 a $a = 85$ {angles of a Δ }, $b = 59$ {exterior angle of a Δ }
 b $x = 40$ {angles on a line}, $y = 40$ {isosceles Δ }
 $z = 100$ {angles of a Δ }
 $t = 30$ {vertically opposite angles and angles of a Δ }
 c $x = 18$ {isosceles Δ and angles of a Δ }
 $y = 63$ {angles on a line}
- 4 a $a + b = 180$ {opposite angles of parallelogram}
 b $a + b = 150$ {angle sum of triangle}
 c $x + y = 60$ {co-interior angles}
- 5 a rhombus {parallelogram, diagonal bisects angle}
 b trapezium {pair of opposite sides parallel, since alternate angles equal}
 c rectangle {one angle 90° , diagonals bisect each other}
- 6 a yes b yes 7 a $a = 34$ b $b = 112$ c $c = 56$
- 8 a parallelogram; $x = 65$, $y = 115$
- 9 a $a = 120$ b $a = 115$ 10 150° 11 20 sides

REVIEW SET 14B

- 1 a $a = 70$ {angle sum of triangle}
 b $a = 40$ {isosceles Δ } c $a = 130$ {exterior angle}
 d $a = 130$ {isosceles triangle, exterior angle}
 e $a = 95$ {angle sum of quadrilateral}
 f $a = 115$ {angle sum of quadrilateral}
- 2 a $x = 102$ {exterior angle}
 b $x = 65$ {vertically opposite, angle sum of triangle}
 c $x = 80$ {angle sum of quadrilateral}
- 3 a $t = 75$ {angles on a line}, $x = 25$ {isosceles Δ }
 $y = 30$ {angles of a Δ }
 b $a = 30$ {angles of a Δ }, $b = 65$ {angles of a Δ }
 c $a = 50$ {angles on a line}
 $c = 100$ {isosceles Δ and angles of a Δ }
 $d = 30$ {vertically opposite and angles of a Δ }
- 4 a $c = a + b$ {exterior angle}
 b $a + b = 205$ {angle sum of quadrilateral}
 c $a + b = 90$ {isosceles triangle}
- 5 a parallelogram {opposite angles equal}
 b right angled isosceles triangle {angles of a Δ }
 c rhombus {parallelogram, diagonals bisect angles}
- 6 $x = 90$, $y = 28$ 7 a $x = 108$ b $x = 130$
- 8 a yes b yes 9 140°
- 10 Solving for n in $\frac{(n-2)180}{n} = 155$ gives $n = 14.4$
 which is impossible as n must be a whole number.